

## **4415.0160      OPERATION AND MAINTENANCE**

**Pipeline operations and maintenance are assumed to be in compliance with all applicable state and federal rules or regulations, unless determined otherwise by the state or federal agency having jurisdiction over the enforcement of such rules or regulations. For public information purposes, the applicant must provide a general description of the anticipated operation and maintenance practices planned for the proposed pipeline.**

As an interstate crude petroleum and natural gas liquids pipeline, the Applicant's design, construction, maintenance and operation functions are regulated by U.S. Department of Transportation in Title 49 CFR Part 195 – Transportation of Hazardous Liquids by Pipeline. As such, oversight of operations is controlled by the federal Pipeline and Hazardous Materials Safety Administration (PMHSA) pursuant to the Hazardous Liquid Pipeline Safety Act, 49 U.S.C. 2001 et seq. The Applicants abide by all regulations issued by that agency. To a lesser extent, the Applicants work directly with various regional, state, and local agencies; landowners; and other interests to ensure its programs meet the needs of the community in which it operates.

The federal agency charged with enforcement of Part 195 is the U.S. Department of Transportation, PMHSA. In 1991, the Minnesota Office of Pipeline Safety (MnOPS) was designated as an inspector on behalf of the PMHSA. Findings, reports and recommendations from MnOPS inspectors are referred to the PMHSA for review and action.

In order to establish standards and guidelines for the Applicant's personnel, as well as to comply with Part 195 and other government regulations, the Company has developed very comprehensive written procedures for the operation and maintenance of the pipeline. The Applicant's procedures and activities meet and generally exceed these government requirements. The following paragraphs provide a very general overview of operation and maintenance practices.

### **Pipeline Control Center**

The Enbridge pipeline control center for Enbridge Liquids Pipelines is located at a central control center in Edmonton, Alberta.

The Control Center is manned by pipeline operators 24 hours per day. A computerized pipeline control system allows these operators to remotely monitor and control the pipeline and related facilities. The Control Center also serves as an emergency centers to receive calls from employees, the public or public officials reporting unusual conditions or pipeline failures.

The computerized pipeline control system has been designed to control the pipeline within pre-established minimum and maximum operating pressures. Both the computer system and operating practices include procedures for abnormal operating conditions, including emergency shutdown and isolation of the pipeline and notification procedures in the event of suspected emergencies.

### **Pipeline Integrity and Reliability Program**

With the volumes transported and the size of its lines and therefore the risk associated with a spill, the Applicants continue to be diligent in its program to ensure its lines are safe. Over the past five years, Enbridge has spent on average, approximately \$20 million annually on pipeline maintenance and protection.

While the Applicants have made significant strides to avoid pipeline failures, no mechanical system can be made absolutely failure free. Although failures have occurred, many of the historical reasons for failures have been recognized and through various construction and maintenance practices have been lessened or eliminated.

Enbridge, as well as others in the industry, have implemented preventative measures to avoid the occurrence of a spill and lessen its impact, should one occur. Enbridge has incorporated these improvements to assist in preventing, detecting, and repairing potential failures before they occur. Many of these improvements have occurred simultaneously with improvements in information system technology, allowing better information recognition, processing, and management.

In addition to a comprehensive internal inspection program, the Applicants have incorporated significant enhancements to pipeline integrity practices as a result of these improvements. Some of the changes include:

- In the past (prior to the use of new technology to internally inspect the pipeline) the Lakehead System was hydrostatically tested in certain segments which had prior failures to test these segments to high test pressures.
- As noted previously, the Applicants now utilize internal inspection instruments to inspect the inside of the pipeline for defects such as corrosion, cracks or dents, so that injurious defects can be repaired before a failure occurs.
- Development of ongoing improvements to the computer pipeline control and monitoring system which enhances the pipeline operator's ability to remotely operate and monitor the pipeline.
- Requiring pipeline control operators to shut down the pipeline if they cannot justify abnormal pressure conditions of the pipeline within a specific, limited time period.

These programs are extensive. Each has been developed over the years of pipeline operation, and many continue to be improved.

The Applicant's operating and maintenance practices are aimed at preventing emergencies on the pipeline. However, it is imperative that the Applicants be prepared to respond to an emergency should one occur. In addition to preventative activities described above, the Applicant's emergency response program includes pre-planning, equipment staging, notifications, emergency, and leak containment procedures.

## **Training**

The Applicants have established a comprehensive orientation, technical, safety, emergency, and on-the-job training program. As personnel progress in pipeline operation and maintenance positions, they receive hundreds of hours of formal and on-the-job training. Demonstrations of competence are shown through review of job performance, periodic pipeline control system simulators, emergency exercises, welding certification tests, and other functions required to continue safe pipeline operation and maintenance.

Enbridge has implemented an “Operator Qualification” program for workers performing critical tasks as required by federal pipeline regulations.

## **Public Outreach**

The Applicants conduct a comprehensive public awareness program to inform residents, public officials, area excavation contractors, and emergency units of government of how to recognize and avoid or respond to a pipeline emergency. The Applicants have also been active at the local, county, and state level in emergency response planning and joint training/exercises to prepare all potential responders to deal with emergencies.

The pipeline route is marked at all public road and railway crossings (at a minimum) to increase the public’s awareness of the underground pipeline. Additional markings are posted at valves, other pipeline facilities, and stations along the pipeline route.

## **Right-of-Way Maintenance**

Many maintenance activities are performed on the pipeline and related facilities. The Applicants have a comprehensive preventative maintenance program that meet and, in many cases exceed, minimum federal safety standards set forth in 49 CFR Part 195. When facilities are added or replaced, there are comprehensive standards for their design and installation in both Applicants’ procedure manuals and contract specifications. Repair pipe is tested and other components used to repair the pipeline meet national standards and regulatory requirements. Welding procedures have been tested to ensure they are sound. Other procedures, such as movement of the pipe, coating repair, corrosion control and tank maintenance are all guided by regulations, industry standards and company written procedures which have been reviewed by the Federal and Minnesota Office of Pipeline Safety inspectors.